

Technical Data Sheet

Purified Mouse anti-Human CD110

Product Information

Material Number:	562137
Alternate Name:	C-MPL; MPL; MPLV; TPOR; Thrombopoietin receptor
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	1.78.1
Immunogen:	Human c-Mpl extracellular domain
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Target MW:	65–72 kDa (HEL cells) and 80–90 kDa (Platelets)
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 1.78.1 monoclonal antibody specifically binds to the human Thrombopoietin Receptor (TPO-R) that is also known as the Myeloproliferative leukemia protein (c-Mpl) or CD110. CD110 is a type I transmembrane protein and a member of the hematopoietin receptor family. It is expressed on hematopoietic stem cells, a subfraction of hematopoietic precursor cells, cells of the megakaryocytic lineage and platelets. CD110 serves as a receptor for thrombopoietin. Upon binding of thrombopoietin to CD110, megakaryocyte proliferation and differentiation is induced and stem cells are protected from apoptosis.



Western blot analysis of human CD110 (Thrombopoietin receptor) expressed by human HEL92.1.7 cells and platelets. Lysates prepared from human HEL92.1.7 cells and platelets were SDS-PAGE electrophoresed and transferred to membranes. They were then probed using Purified Mouse Anti-Human CD110 antibody (Cat. No. 562137) at concentrations of 0.25 (lane 1), 0.125 (lane 2) and 0.06 (lane 3) $\mu\text{g/ml}$. CD110 is identified as approximately 65-72 kDa bands from HEL cells (Left Panel) and 80-90 kDa bands from platelets (Right Panel). The molecular masses observed for the Thrombopoietin Receptor protein using the 1.78.1 antibody for Western blotting may vary due to splice variations and/or different post-translational modifications of the receptor obtained from different cell types.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Flow cytometry	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Abbott C, Huang G, Wei P, et al. Mouse monoclonal antibodies against human c-Mpl and characterization for flow cytometry applications. *Hybridoma*. 2010; 29(2):103-113. (Clone-specific: Flow cytometry)

Broudy VC, Lin NL, Fox N, Taga T, Saito M, Kaushansky K. Thrombopoietin stimulates colony-forming unit-megakaryocyte proliferation and megakaryocyte maturation independently of cytokines that signal through the gp130 receptor subunit. *Blood*. 1996; 88(6):2026-2032. (Biology)

Deng B, Banu N, Malloy B. An agonist murine monoclonal antibody to the human c-Mpl receptor stimulates megakaryocytopoiesis. *Blood*. 1998; 92(6):1981-1988. (Biology)

Gotoh A, Ritchie A, Takahira H, Broxmeyer HE. Thrombopoietin and erythropoietin activate inside-out signaling of integrin and enhance adhesion to immobilized fibronectin in human growth-factor-dependent hematopoietic cells. *Ann Hematol*. 1997; 75(5-6):207-213. (Biology)

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